[A VLSI NEURAL FUZZY CLASSIFIER FOR HANDWRITING RECOGNITION]

Abstract of Disclosure

A handwriting recognition device using fuzzy logic and cellular neural network for unconstrained handwritten numeral classification is provided. The current mode VLSI classifier has a I/O circuit for inputting and outputting a plurality of membership functions. An extraction unit comprising a CCD extractor with a CNN structure and a compression unit receives a to-be-recognized character having a plurality of input features for generating a plurality of features values after compression. A membership function generator stores the plurality of membership functions and receives the plurality of features values to generate a plurality of current-type membership degrees. A plurality of switched-current integrators receives the plurality of current-type membership degrees for generating a plurality of synthesis membership degrees. A k-WTA circuit is provided for comparing the plurality of synthesis membership degrees and output the plurality of synthesis membership degrees as well as the corresponding characters in an order of magnitude.

Figures